

**WHAT IS CLAIMED IS:**

1. An image recognition apparatus comprising:
  - a reference image memory for storing one or more reference images used for image recognition;
  - a similarity detector for comparing an input image, to be recognized, with the one  
5 or more reference images stored in the reference image memory, and for determining whether or not a reference image is similar to the input image;
  - a comparison controller that, when the similarity detector determines that a similar reference image that is similar to the input image is present, compares information on a time of photo taking of the input image and a time of photo taking of the similar  
10 reference image; and
  - a renewal controller for renewing the similar reference image stored in the reference image memory based on the input image, when the comparison controller determines that the input image is newer than the similar reference image.
2. An image recognition apparatus according to claim 1, further comprising  
15 a photo taking time information receiver that receives input of the information on the time of photo taking of the input image and adds the information to the input image.
3. An image recognition apparatus according to claim 1, further comprising an extractor for extracting an image of a face of a person from an image, said extractor storing the image of the face in the reference image memory, and  
5 wherein the similarity detector is adapted to compare the image of the face extracted from the input image by the extractor with images of faces stored in the reference image memory, and to determine whether or not images being compared are similar to each other.
4. An image recognition apparatus according to claim 1, wherein the similarity detector is adapted to compare the input image successively with each of a plurality of reference images stored in the reference image memory.

5. An image recognition apparatus according to claim 1, wherein said similarity detector is adapted to compare a feature obtained from the input image with a feature obtained from a reference image and to determine whether or not the input image and the reference image are similar to each other.

6. An image recognition apparatus comprising:  
a reference image memory for storing at least one reference image used for image recognition;

an input image receiver for receiving, in real time, an input image to be recognized;

a similarity detector for comparing the input image received by the input image receiver with the at least one reference image stored in the reference image memory, and for determining whether or not a reference image is similar to the input image; and

a renewal controller for renewing a similar reference image that is similar to the input image based on the input image when the similarity detector determines that the similar reference image is present in the reference image memory.

7. An image recognition apparatus according to claim 6, wherein the similarity detector is adapted to compare the input image successively with reference images stored in the reference image memory.

8. An image recognition apparatus according to claim 6, further comprising:

an extractor for extracting an image of a face of a person from an image, said extractor storing said image of the face in the reference image memory, and

wherein the similarity detector is adapted to compare an image of a face extracted from the input image by the extractor with images of faces stored in the reference image memory, and to determine whether or not images being compared are similar to each other.

9. An image recognition apparatus according to claim 8, wherein, when images of a plurality of faces are extracted from the input image by the extractor, said

similarity detector compares the extracted image of each one of said plurality of faces successively with the reference images stored in the reference image memory.

10. An image recognition apparatus according to claim 6, wherein said similarity detector compares a feature obtained from the input image with a feature obtained from a reference image and to determine whether or not the input image and the reference image are similar to each other.

11. A method for recognizing an image by use of a plurality of reference images, comprising the steps of:

5 comparing an input image to be recognized with the reference images and determining whether or not the input image is similar to one of said plurality of reference images;

10 comparing, when a similar reference image is determined to be similar to the input image, a time of photo taking of the input image with a time of photo taking of the similar reference image; and

renewing the similar reference image, based on the input image, when a result of the comparison of the time of photo taking of the input image and the time of photo taking of the similar reference image is that the input image is newer than the similar reference image.

12. An image recognition method according to claim 11, wherein the input image is compared successively with reference images.

13. A computer-readable recording medium having recorded thereon a program for performing a method comprising the steps of:

5 comparing an input image to be recognized with at least one reference image and determining whether or not the input image is similar to said at least one reference image;

comparing, when a similar reference image is determined to be similar to the input image, a time of photo taking of the input image with a time of photo taking of the similar reference image; and

renewing the similar reference image, based on the input image, when a result of

the comparison of the time of photo taking of the input image and the time of photo taking  
10 of the similar reference image is that the input image is newer than the similar reference  
image.

14. An image recognition apparatus comprising:

a reference image memory for storing at least one reference image;

a similarity detector for comparing an input image with a reference image from  
said reference image memory and for determining whether or not said reference image is  
5 similar to said input image;

a time comparison controller for comparing a time associated with said input  
image and a time associated with said reference image, when said similarity detector  
determines that said reference image is similar to said input image; and

a renewal controller, responsive to a result of the comparison performed by said  
10 time comparison controller, for determining whether or not said reference image should be  
renewed based on said input image.

15. An image recognition apparatus according to claim 14 wherein,

said renewal controller is adapted to renew said reference image based on said  
input image when said time associated with said input image is after said time associated  
with said reference image.

16. An image recognition apparatus according to claim 14 wherein,

said similarity detector is adapted to compare a different reference image with  
said input image, when said similarity detector determines that said input image is not  
similar to said reference image.

17. An image recognition apparatus according to claim 14, wherein

when said similarity detector determines that said reference image is not similar  
to said input image, said reference image memory is adapted to store said input image and  
information relating to said input image.

18. An image recognition apparatus according to claim 17, wherein when said information relating to said input image matches information relating to said reference image, said renewal controller is adapted to renew said reference image based on said input image when said time comparison controller determines that said time  
5 associated with said input image is after a time associated with said reference image.

19. A method for recognizing an image comprising the steps of:  
comparing an input image with at least one reference image and detecting  
whether or not the input image is similar to the at least one reference image;  
comparing, when a similar reference image is determined to be similar to the  
10 input image, a time associated with the input image with a time associated with the similar  
reference image; and  
renewing the similar reference image based on the input image depending on a  
result of the comparison of the time associated with the input image and the time  
associated with the similar reference image.

20. A method for recognizing an image according to claim 19, wherein said  
15 step of renewing the similar reference image is performed when the time associated with  
the input image is after the time associated with the similar reference image.